AMENDMENTS TO THE SPECIFICATION:

Please insert the following centered subheading before the paragraph beginning at page 1, line 3:

FIELD OF THE INVENTION

Please insert the following centered subheading before the paragraph beginning at page 1, line 9:

BACKGROUND OF THE INVENTION

Please insert the following centered subheading before the paragraph beginning at page 3, line 25:

SUMMARY OF THE INVENTION

Please amend the paragraph beginning at page 7, line 1, as follows:

Transponders and interrogators, such as those described in EP 494,114 A and EP 585,132 A ~~(the entire contends of which are incorporated herein by reference~~, may be adapted to produce transponders and interrogators according to the invention.

Please amend the paragraph beginning at page 8, line 28, as follows:

Figure 4 shows, in outline, tag 67 which may be used with the reader of figure 2 and figure 5 shows a timing diagram for the signal paths marked in figure 4. The tag 67 includes a dipole antenna, the poles of which are shown as 60 and 61. A code generator 62, when enabled by a logic circuit 64 modulates a transistor Q1 with a code,

using Manchester coding (signal 77). The timing for the code generator is derived from a local oscillator 66. Diodes D1 and D2 in combination with a capacitor C1 supply the power for tag 67. The oscillator is disconnected from the random wait time generator when either FF1 or FF2 is in the reset state (signals 70 and 72). FF1 is set only when the tag 67 is powered up and resets when the tag 67 is switched off after being read successfully. FF2 is in the reset state when the tag 67 is muted and in the set state on power up and when the tag 67 is in its normal operating mode. When the tag 67 initially receives the reader signal FF1 will be in the set state. On power up the logic circuit 64 triggers the random wait timer 63 to select a random value and begin a countdown.

Please amend the paragraphs beginning at page 8, line 16, as follows:

Figure 3 represents the reader signal and the replies from the transponders. The reader signal is powered up a time t_0, whereupon the transponders within the reader field are powered and begin random wait cycles. In the example shown in figure 3, tag 1 transmits a signal ~~20~~ at time t_1. The reader recognises a transponder signal and, by interrupting the reader signal at time t_2, makes mute instruction 21 which halts the random wait cycles of tags 2 and 3. When tag 1 has completed transmitting the signal 20 the reader issues an instruction 22 at time t_3.

In the example shown in figure 3, tags 2 and 3 are temporarily muted by the broadcast of the mute instruction 21 at time ~~t_2~~t_3. Tags 2 and 3 are instructed to resume the random wait cycle by the broadcast of the disable/wakeup instruction 22, which also disables tag 1 until it is removed from the field. In this figure, the read process is then successfully completed for tag 3 followed by tag 2.

Please amend the paragraphs beginning at page 9, line 12, with the following rewritten paragraphs:

A long gap (a disable/wakeup instruction) will set FF2 and a short gap (mute instruction) will reset FF2. Therefore a disable/wakeup gap from the reader is detected by the gap detector which sets FF2, which enables the random wait time generator to run. The random wait time generator indicates (signal 75) the end of the countdown to the logic circuit 64 which then enables (signal 76) the code generator 62 to modulate transistor Q1 with the code. The logic circuit also inhibits the gap detector circuit for the time tag 67 takes to transmit the signal. If, during the countdown a mute gap from the reader is received (passing control to another transponder) the gap detector switches FF2 into the reset state, thereby disconnecting the oscillator (signal 73) and pausing the countdown. FF2 remains in the reset state until another pulse from the reader is received (the disable/wakeup gap which disables the controlling transponder). The random wait timer then continues the countdown until either the transponder signal is transmitted or another mute gap is received.

If the reader issues an appropriately timed disable/wakeup gap once the transponder signal has been received by the reader free from noise or other interference. The gap detector circuit detects this gap and indicates the presence of this gap to logic circuit 64. Provided that this gap occurs at a predetermined time after the end of the transponder signal, e.g. 5 clock pulse after the end of the code, logic circuit 64 (signal 71) will reset FF1. FF1 (signal 72) disconnects the oscillator until it is reset, in this case after removing the tag 67 from the field and allowing capacitor C1 to discharge sufficiently.

If it is not necessary for the tags to be switched off after successful detection of the transponder signal, flip-flop FF1 and switch SW1 may be omitted entirely from the tag 67.

Figure 6 shows a flow diagram for the operation of the tag 67 illustrated in figure 4.